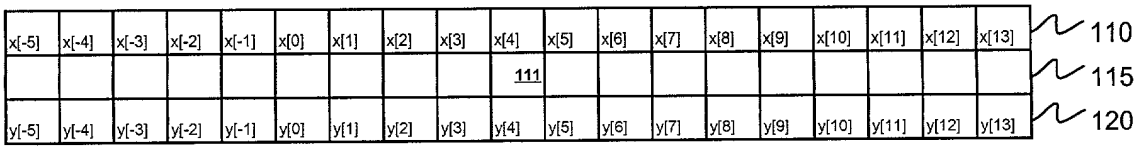

Figure 1A

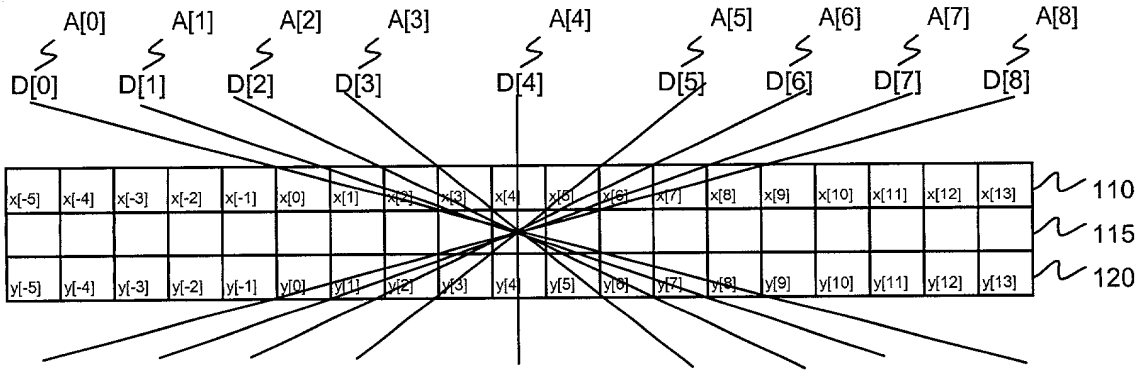

Figure 1B

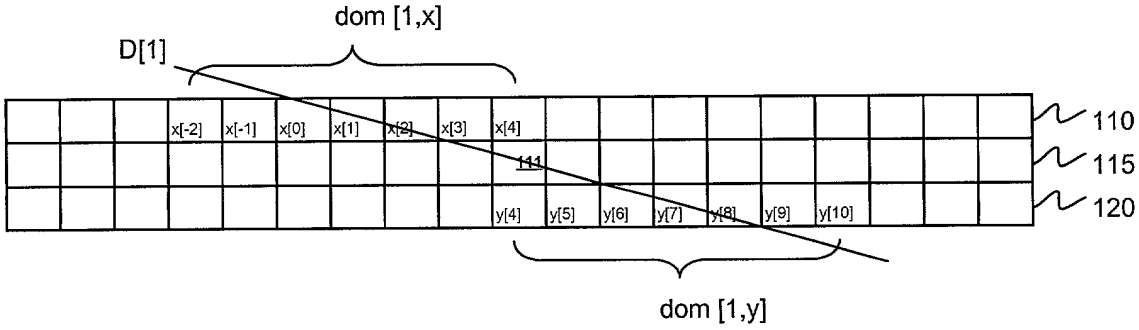

Figure 1C

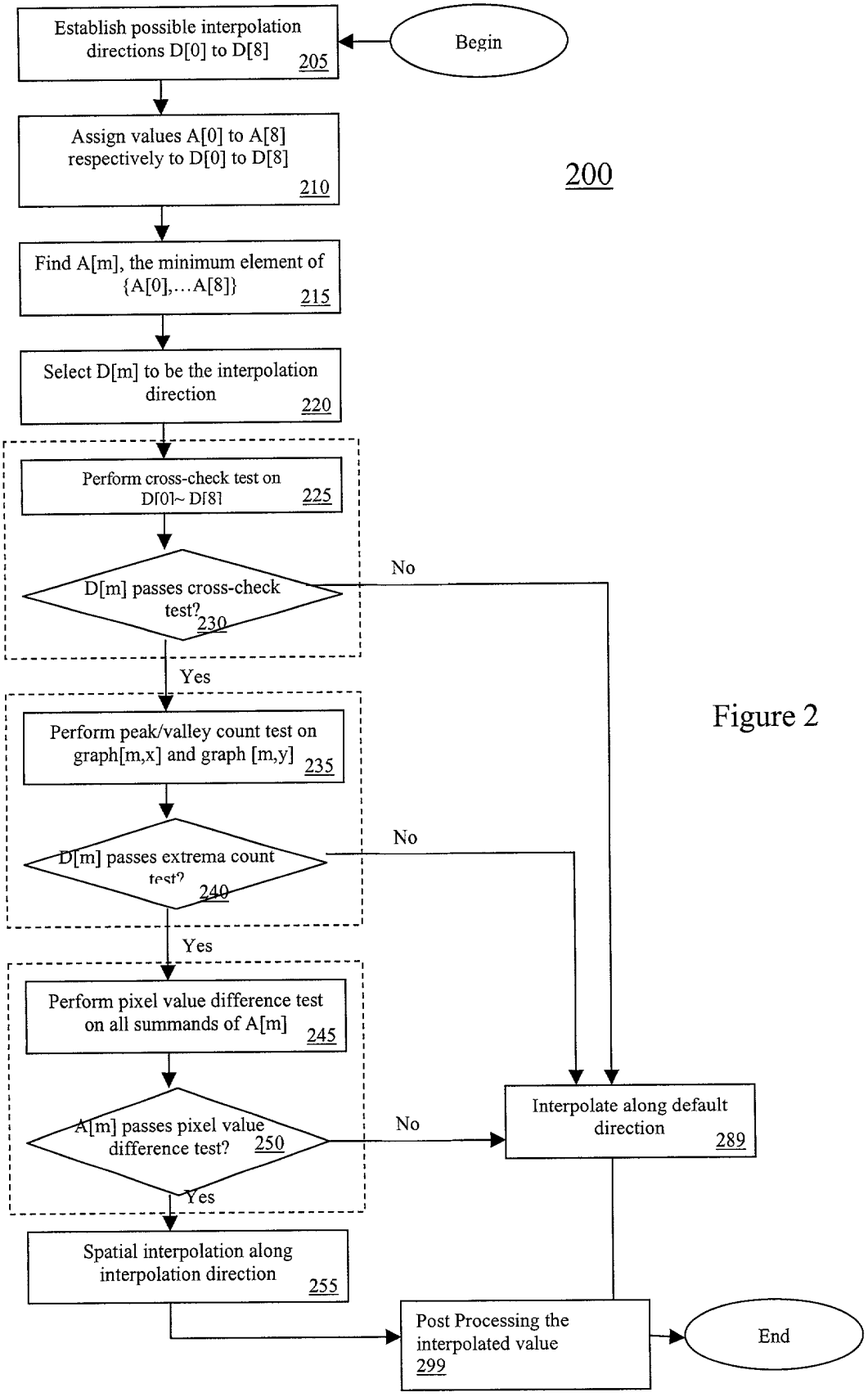
Begin
Establish possible interpolation directions D[0] to D[8] 205
Assign values A[0] to A[8] respectively to D[0] to D[8] 210
Find A[m], the minimum element of {A[0],...A[8]} 215
Select D[m] to be the interpolation direction 220
Perform cross-check test on D[0]~ D[8] 225
D[m] passes cross-check test? 230
No
Yes
Perform peak/valley count test on graph[m,x] and graph [m,y] 235
D[m] passes extrema count test? 240
No
Yes
Perform pixel value difference test on all summands of A[m] 245
A[m] passes pixel value difference test? 250
No
Yes
Interpolate along default direction 289
Spatial interpolation along interpolation direction 255
Post Processing the interpolated value 299
End
200

Figure 2

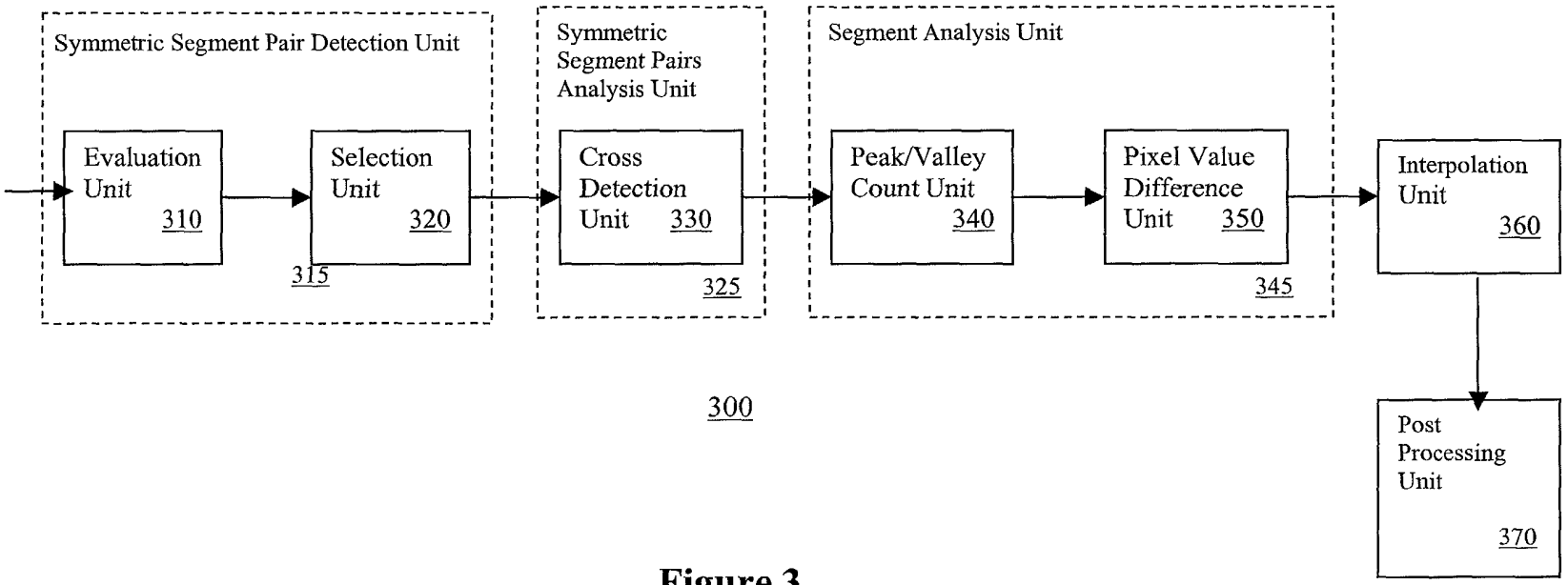
Symmetric Segment Pair Detection Unit
Evaluation Unit 310
Selection Unit 320
315
Symmetric Segment Pairs Analysis Unit
Cross Detection Unit 330
325
Segment Analysis Unit
Peak/Valley Count Unit 340
Pixel Value Difference Unit 350
345
Interpolation Unit 360
Post Processing Unit 370
300

Figure 3